The Legacy of Napster

Matthew David, Durham University

Introduction

This chapter is primarily concerned with the economic question of scarcity, and the possibility that online distribution abolishes such scarcity. Online digital distribution threatens/promises to abolish scarcity in relation to recorded music. In part this followed the logic of all technologies that increase productivity and hence disrupt established markets. Earlier technical shifts that seemed initially to challenge vested interests (such as the development of print media – Habermas, 1962; and telephony, radio and television – Wu, 2011), have been controlled in the interests of profit. However, free sharing online continues to disrupt even the new business models that have arisen in its wake. Technical developments from diverse actors have come together in an array of alternative forms with divergent consequences that remain unresolved. A legal game of cat and mouse led to forms of distribution that have no specific technical logic except in relation to specific attempts at control. This chapter addresses streaming, which has emerged in the musical field as a legal form of digital music access, just as it has emerged as the primary mode of unlawful access in relation to live digital sports broadcasting. The chapter then addresses the question of whether legal music streaming services can, as they claim, tame unlawful access to music. To date, legal music streaming services have failed to win over audiences to

a subscription based, user-pays model of access. Legal services simply emulate the free sharing model (which is advertiser-funded). Advertising revenue from legal streaming services does now flow to rights holders, but this rarely filters meaningfully down to artists, so only replicates their existing exploitation. Three quarters of legal streaming service users, and all non-legal service users, don't pay. Gaining free access to music continues therefore to leave service users with more money to pay artists for live performance – the primary consequence of digital sharing (Krueger 2004, and Krueger and Connolly 2006). As such artists continue to benefit. This chapter addresses the history of recorded music, the rise of commercial digital formats and then of free file-sharing alternatives. This is then followed by a discussion of the legal and commercial cat and mouse struggles between record companies and free sharers, culminating in the rise of today's free but legal streaming services. Parallels and distinctions are drawn between such digital music streaming services, and radio as well as (more interestingly) live-streaming in relation to live sports broadcasting. Where streaming is seen as a potential benefit to the recording industry, it is seen as the primary threat to sports broadcasters. This chapter will argue it is precisely because live-streaming is a threat to business as usual in today's digital sports broadcasting industry; that it is not a credible solution for the recording industry in relation to the rise of free music sharing online. However, precisely for this reason (that audiences don't have to pay for mediated access), streaming (and free sharing more widely) actually benefits performers because money not spent on mediated access leaves more money to be spent going to live events (for which performers are better paid).

Control, format and content

Recording music allows repetition without the need to repeat the labour required to make it. This has the effect of reducing scarcity and widening the audience able to access that sound. This reduction of scarcity has always been contradictory from the point of view of those that seek to make a living from making music, both musicians themselves and those involved in selling access to it. Recordings increase the potential scale of an audience, but such widening distribution also creates a question of control over such distribution. The production of copies increases the potential audience but also increases the risk that that increase cannot be controlled.

The advent of recording, telephony and then radio saw conflict over such access and control, with live performers resisting the attempt by record and radio distributors to gain access to their content, and/or to distribute it without payment to performers; whilst early recording and radio distributors sought to limit the control performers had over access to and distribution of their work (Kirton, 2014). Later conflicts over tape, the cassette, the compact disc and the internet in many respects repeated such conflicts over access and control.

Prior technologies of recording and distribution (from the earliest recording drums and discs, through to radio and the cassette), whilst disruptive in their inception, were eventually incorporated within highly profitable reconstructions of ‘the recording industry’ (Kirton, 2014). Digital recording reversed this pattern. The CD enabled an unprecedented

profit storm for the established players in the recording industry (Sandall, 2007). Only later, when digital storage was fused with online distribution, did digital recordings usher in a fundamental threat to record companies. Free internet distributed digital music remains an intractable challenge to scarcity and therefore profitability. New business models have arisen in response to the rise of free digital music sharing. These seek to revive the commercial recording industry. At the present time, the legacy of Napster (the earliest mass access digital music sharing service) is a parallel economy. Free access has compelled a reinvention of commercial recording business models, whilst attempts to defend the copyright-based recording industry have failed to eliminate free sharing. Technical and legal monopoly controls have been rendered porous, leading to a post-scarcity economy. A market exists only to the extent that paid services can compete with (rather than prohibit) free alternatives. Audiences may be persuaded to pay for what they can otherwise access freely by other means. They may not.

Not quite P2P

The paradoxical nature of distribution technologies (whether these be records or the internet), is that they increase the scope of a potential market whilst at the same time enabling uncontrolled circulation and access. This is only an extension of the essential paradox of technology itself within market economies. Technology increases productivity and hence increases the potential for making more things that can be sold. Yet, such productivity creates the risk to producers, and benefit to consumers, that increasing output

will force prices to fall as supply outstrips demand. Yet simple linear projections of such tendencies towards overproduction, and for the rate of profit to fall, do not hold true. This is because, as Marx (1995, pp. 438-57) noted (rather problematically for his own account of historical development), all such tendencies are subject to significant counteractions. Prices routinely stay above the average cost of production through particular firms achieving intensifications of work, depression of wages, reducing the cost of capital stock, increasing market size and so on. In Marx's 19th century capitalism, price was also held up through various protectionist measures and monopolistic practices still prevalent today. Capitalism (then and now) is about protecting property, and if this means suspending markets through various forms of prohibition, this is what happens. Markets are primarily advanced to discipline labour, whilst property protection routinely involves market suspension (David and Halbert, 2015). In the domain of informational goods in the 20th and 21st centuries, the essential vehicles for maintaining protection over property and profits from the threat of market competition are intellectual property rights. In the domain of music, that means copyright.

In the late 20th century, informational media corporations undertook massive waves of technical and economic integration. Technical integration took the form of increased digitization of content and the development of increasingly efficient modes of compression to enable more integrated storage and distribution (David and Halbert, 2015). Economically, new extensions and the global harmonization of IP laws (via the newly formed WTO and its 1994 TRIPS agreement), saw a wave of horizontal and vertical mergers and takeovers to create today's global cross-media network enterprises (Castells, 2009). Digital storage,

compression and distribution reduced costs and compelled user-reformatting. At the same time as globalization increased audience size; technical and legal (IP) monopolies restricted competition. This led to a perfect profit storm (Sandall, 2007).

However, commercial developments in digitization were paralleled by non-commercial developments, such as in the development of the internet out of US military and state research, and of the World Wide Web from European government funded scientific research. The advent of search and share software that could combine the technical efficiencies of commercially developed digital compression/storage, and state funded digital distribution platforms, challenged the digital profit storm by freeing content from both technical and legal monopoly control. Nonetheless, it should be noted that Napster, the earliest large scale sharing service, was not a 'peer-to-peer' distributed service, fully extending some inevitable logic of the internet. It used the same central server architecture that its 1999 sibling Facebook continues to use today (David, 2010, p. 38). What continues to serve Facebook in its desire to filter and mine its users' content was Napster's Achilles heel.

Legal Cat and Mouse – Not a Technical Necessity

That Facebook retains a central server architecture, whilst copyright infringing free music sharing services do not, reflects an ongoing legal cat and mouse history, and amply demonstrates that technical development does not reflect any simple necessity, but rather a

complex and contingent set of moves and countermoves by various actors. In 2001, Napster was successfully prosecuted in the US courts for contributory infringement because infringing copies of music files passed directly through Napster's central server on route between uploaders and downloaders, rather as a 'fence' is said to be 'handling stolen goods'. The successful targeting of Napster's central server led to the development of increasingly distributed forms of software. Services like Grokster, Morpheus and Kazaa moved from requiring users to locate one another via the services' server but then sending files independently, towards an even more distributed model where the provider made the software available but then users interacted entirely independently of the supplier (David, 2013). Service providers were still subject to legal attack if they promoted infringement on their own web-pages, but this simply led to such promotion being removed (however honestly), or in 'pirated' versions of the software (Kazaa lite and Kazaa ++ and so on) being distributed independently of their original commercial developers.

However, the increased detachment of software providers from users' actions led to legal attacks shifting towards uploaders, the users who were said to be either making infringing content available, or 'distributing' it (a more serious offence). Services like Morpheus and Kazaa, whilst themselves increasingly immune from legal action, made it easy to locate uploaders precisely because they were designed to allow potential downloaders to find such providers of content (David and Kirkhope, 2004). Rights holders simply had to use the sharing software as users would in order to locate the IP addresses of uploaders they could then attempt to prosecute (Wall, 2014). Successful prosecutions in the mid-2000s (particularly in the United States) encouraged the development of (and migration of users

towards) ‘torrent’ services which distributed not only access but also supply. A download would be spliced together from a ‘torrent’ of elements from a host of uploaders. Any one uploader would only be contributing a fraction of a file, and hence remained below the level of legal liability. In addition, with a file being pieced together from multiple sources it was impossible to tie up the act of ‘making available’ (not quite the full act of infringement) with ‘distribution’ (the more serious offence). The most famous torrent tracker locating website is The Pirate Bay (TPB). Whilst shielding uploaders from the law, torrent services required a reversion back to having users locate content via the tracker locating website’s central server, making tracker sites legally vulnerable. This led to the successful prosecution and imprisonment in Sweden of TPBs founders in 2009. However, the site simply relocated and distributed its servers to a variety of less regulated jurisdictions and remained in operation. Attempts to prevent access to sites that enable the distribution of infringing content now involve rights holders seeking court injunctions requiring internet service providers to block access to sites that are said to enable infringement (David et al., 2016). However, national jurisdictions that enforce such blockages are easily circumvented using virtual proxy networks and onion routers, with the countries using such blocking tactics being those that have also seen the highest uptake of VPNs and re-routing services and software (Brown, 2014).

Commercial Cat and Mouse Too

Prior to the advent of file-sharing, record companies maintained a prohibition on the release of their content via any kind of cross-company Internet downloading service. The loss of control that such a joint platform would involve appeared as a serious threat to their technical and legal monopoly based business model. For as long as they could, record companies ensured any such scheme was prevented. Whilst the development of common compression formats (such as the MP1-4 formats) allowed content industries to internally distribute music files for the purpose of transferring material to different locations within increasingly global operations (such as for production, mastering, and manufacture), the potential of compressed files as a means of producing a more 'efficient' mode of accessing content by consumers was not pursued as it challenged corporate control relative to audiences. It was only the development of free IP infringing services (such as Napster and those services that followed) that 'let the cat out of the bag' as it were. Apple's iTunes presented record companies with a legal alternative to what they could no longer prevent legally or technically. It is virtually inconceivable that iTunes would have been accepted by record labels had free sharing alternatives not forced their hand (England, 2015). As such, one of the fundamental legacies of Napster is iTunes.

In addition, the legal cat and mouse struggle outlined above had another commercial consequence. New forms of infringing service – emerging to evade the legal bottlenecks targeted by rights holders – produced new formats that commercial actors have had to adapt to. The most interesting of these today is 'streaming', where users access content online but do not make a copy. Streaming is significant because two very different legal pathways have been followed. One is in live digital sports broadcasting. The other is in

music. This chapter will focus primarily here on music, but will also examine the parallel case of live sports television.

Spotify – the Taming of 'Free' or its Triumph?

Spotify originated in Sweden in 2006, was first launched commercially from London in 2008, and has since then developed its market across Europe and the Americas in particular. Its business model is to allow users to stream music in exchange either for a 'premium' subscription payment or for no payment but with a requirement to hear advertising every so many (usually three) tracks. Since 2008 the numbers using the service have risen to seventy five million (Spotify, 2015). As user numbers have increased a consistent proportion, one quarter, have opted to pay the 'premium' subscription charge. Most use the service for free in exchange for being subject to advertising. Variations in what counts as a 'premium' subscription muddy the water slightly as discounted payment options mean that not all the 25% paying are paying the full 'premium' rate. Variation in the premium rate itself ($9.99, £9.99 and 9.99 Euros) confuses matters further. Also, variation exists in what non-paying users are able to access. Spotify has tried various means to press users towards the 'premium' payment option, by limiting what non-paying users can access in terms of hours of use and numbers of plays per month of any specific track they can listen to. However, these restriction attempts are difficult to sustain as users can simple choose from a range of alternative legal streaming services available if they find attempts to encourage premium subscription payments through reductions in free service quality diminishes their

user-experience (iSkysoft, 2015). As the cat and mouse history of free sharing has shown, each new attempt to regulate or discipline audience behaviour has incentivised the creation and uptake of new, ever more distributed, modes of sharing and evasion.

This tension between wanting to increase subscriber payments and not wanting to push users and prospective users away towards alternative free services (infringing or otherwise) highlights the position Spotify occupies and the gap it seeks either to bridge or at least avoid falling into. On the one hand, as pointed out by singer and guitarist Mike Vennart (2012), Spotify's introduction in some territories has coincided with a decline in use of existing pay for access/recording services (such as iTunes and CD sales). Lucy England (2015) notes the even greater problem faced by Apple's streaming service Beats. Beats (which Apple bought and relaunched) has pursued a paid subscriber only model, but this places it in competition with its own iTunes sales (which have been falling ever since the introduction of Spotify). However, at the same time it has been observed that in other locations the introduction of Spotify has seen a reduction in the use of illicit free sharing services like The Pirate Bay (Ingham, 2013). To the extent that the former migration is taking place, where Spotify draws to itself users who had formerly been accessing music by paying for it (online or in physical form), Spotify is simply fishing for users from within an existing pool of paying customers. Three quarters of Spotify users are not paying to access content. Payment flows to rights holders from Spotify's advertising revenues, but at a very low rate per play. If these users reduce their recorded music purchasing as a result of such legal free access services, declines in what rights holders receive from iTunes and physical sales is unlikely to be made up for by Spotify's advertising revenues. On the other hand, the alternative migration –

where a user was formerly accessing music from a copyright infringing service (like The Pirate Bay – TPB) – would mean that advertising revenues that were previously going to the infringing service provider (who was not passing them on to rights holders) will now go to Spotify who will be passing on a large part to IP holders.

Tim Ingham (2013) argues that Spotify is taming the digital domain in creating a format that allows IP holders to harvest revenues from service providers, but if a legal service that remains predominantly free to access does see a reduction in other legal means of access, as suggested by Vennart (2012) and England (2015) what is gained may only cancel out what the same service loses for IP holders. Ironically, in either case, Spotify represents a triumph for the logic of free sharing. Whether or not a Spotify user has migrated from legal access or infringing access, Spotify provides free access to most of its users whether or not record companies make or lose money overall from its existence. To this extent, Spotify – and other legal streaming services – are both taming free sharing and manifesting its triumph. That free access is legal may be seen as 'taming it', if being 'wild' is understood to mean it's being against the law. If by 'wild' is meant the capacity of users to gain access to content for free (without paying), this has not diminished. Whilst audiences do 'pay' for free access by giving up time (to advertising) and privacy (in terms of having their preferences monitored and sold on), they keep their money. This has led to more spending on live performance (see below), which benefits artists. Spotify has certainly not 'tamed' 'free' access in the sense of reducing it. It has offered the possibility of diminishing the threat to record companies of free access. However, even this is only a tentative possibility as 'fishing in the same pond' may in fact still mean that Spotify's (and other streaming service providers) increased

revenues are only bought at the expense of losses from other sales. As Spotify (2014) themselves point out, their earnings growth since 2008 represents an increasing share of an overall sales volume in recorded music that has failed to recover after massive falls since 1999. Spotify has not revived overall sales. It may have limited potentially even greater falls, but it may have simply re-directed existing customers' money or even diminished their future spending. The combination of change, volatility, geographical diversity, limited data, the invisibility of much illicit behaviour and the impossibility of comparison with counterfactual scenarios (where Spotify did not exist but where all other things remained the same), make it impossible to fully verify of refute claims that Spotify is either propping up or further weakening the recording industry's ability to sell recorded music.

Who Pays and Who Gets Paid?

However, whether or not Spotify is sustaining or further supressing recorded music sales is not the most important issue anyway. A problem routinely pointed out about Spotify concerns the rate of payment made to artists in relation to the number of times their work is streamed by service users. Spotify pays around 70% of its subscriber and advertiser revenues to rights holders. Its seventy five million users are streaming tens of billions of 'plays' per year. Gross revenues reached over a billion US dollars in 2014, and royalties rose to $500 million US dollars in 2013, and to $1 billion US dollars in 2014 (Spotify, 2014). With so many individual streams the rate paid to rights holders per stream (on average) is between $0.006 and $0.0084 US. Spotify pay different rates in different jurisdictions and

depending upon whether a stream was made by a premium or free access subscriber. Whilst these numbers are very small, when multiplied by thousands or even millions of streams in any particular year the total amounted to – as suggested - $1 billion US in 2014.

Yet, artists have routinely complained that tens of thousands and even millions of streams of their tracks have still left them receiving payments that are a fraction of what even such tiny amounts per stream would suggest they should be receiving when such per-stream values are multiplied by the number of streams accessed (David Byrne, 2013; Thom Yorke in Dredge, 2013; and Taylor Swift in Linshi, 2014). This gap is however not hard to explain, even if the explanation cannot serve as any kind of a justification. Spotify pays seventy percent of all the revenues it receives to 'rights holders', but rights holders are rarely ever the artists themselves and are in almost all cases the artists' record companies. The record company then treats the revenue as though it were from the sale of records under the same contractual conditions as are applied to physical recordings sold. The conditions of such contracts will usually assign to the artist a royalty of between five and 15 per cent of net sales and from these royalties will be deducted all 'recoupable' costs involved in the production of the artists' work (including studio time, producer costs, management and legal fees, promotional videos and other expenses – see Hull, 2004). As the greater part of the record company's costs are off set against a very small percentage of the work's net sales value (David, 2010), most recording artists find their royalty revenues simply swallowed up by recoupable costs, leaving them in debt to their record companies. The advance they received – which was itself almost wholly 'spent' by the record company on

the expenses noted above (though much of this 'spend' is 'in house' and so its calculation and scale is open to question) – is rarely ever paid off, creating a form of debt bondage.

To the extent that Spotify pays record companies most of its earnings, the issue of why so little of this goes to artists is only a repetition of what happens when a customer pays for a CD in a shop and how little of that goes back to the artist. This is usually *none at all* as the shop takes its share and the record company receives the rest. From this a royalty is calculated but out of this is deducted the cost of the expenses invested in the artist and their work. Record companies claim it is necessary to keep most earnings and to recoup their costs from the artist's slender royalties share because labels have to 'subsidise' all the artists who fail to recoup. However, this failure is primarily because their royalties percentage is so low and recoupable expenses set against these royalties are so high. As such, this is a vicious circle leaving most recording artists in debt even when record companies make profits, and even further in debt when labels don't make a profit from their work. Spotify's payment system simply replicates existing arrangements, as it hands revenues over to rights holders and not to artists themselves. Spotify is not 'the problem' as such, but neither is it any kind of a solution to 'the problem' – which is that almost all recording artists end up in debt to their record companies due to the contractual conditions of exchanging their IP for a royalty whilst also accepting to pay the cost of their work's production and promotion from that royalty (Albini, 1994; Love, 2000).

To the extent that artists do not get paid (very much at least) via Spotify, it is no different from either infringing free sharing services or the traditional record company model of distribution. To the extent that Napster and other copyright infringing services reduced the opportunity costs for fans whose payment for recordings previously reduced revenues available for attending live concerts, the rise of free sharing caused an increase in ticket prices and ticket volumes sold. Prior to Napster a fan could not buy a CD and still have the money they would have just spent, to then spend on going to see that artist live. Alan Krueger (2004, and with Connolly, 2006) tracked ticket prices and volume of tickets sold in the decades up till and after the advent of free sharing software. The advent of CD burners for the domestic market did see a slight rise in money spent on live concerts from the mid-1990s. The advent of file-sharing from 1999 saw a collapse in the price and volume of CDs sold occur in direct relation to the increase in concert ticket prices and the volume of their sales. With free access retaining the function of publicity for an artist, reduced spend on CDs allowed fans to pay more and go to more live concerts. As artists receive payment for live performance rather than the promise of royalties that are almost entirely consumed by labels in the production of recorded works, artists are better off performing live than they are selling records. As the decline of the latter increased, the former artists benefited from the decline in record sales.

If Spotify users are 'being poached' from the pool of those who were previously paying for recorded music, what is a problem for the recording industry, would in fact be a good thing for artists, if this means that these migrants are now paying less for recordings than they were before. With most Spotify users not paying to use the service, such a migration would

leave more listeners with more money to pay for live concert tickets, for which artists actually get paid. Ironically, if Spotify were to 'tame' the wild frontier of free sharing – as it claims is its business plan – by moving users of 'pirate' services over to being paying premium subscription service users this increase in payment for recorded content would increase opportunity costs. Money spent on Spotify would not then be free to pay for concert tickets (and hence real income for artists).

Parallel Economies of Free and Paid Access

A parallel presents itself in relation to radio in the first half of the twentieth century. At first radio stations sought to play records without paying performers, rather as infringing music sharing services do today. In time, regulation was introduced and radio stations were required to pay rights holders for the right to broadcast content. This cost was recouped by commercial radio stations through advertising rather as is the case with Spotify today. One thing that did not happen was the development of subscription based radio stations, in large part because broadcasts could not be effectively encrypted (Kittler, 1997). There was no attempt to make them so, in contrast to today's digital services which have experimented with all manner of encryption – though with very little success (David, 2013).

The counterfactual case of digital sports broadcasting

In the music industry different labels release music which they retain monopoly control over, but which then competes for sales with the work released under monopoly control by other commercial actors. In sport, it is often leagues that control rights to distribute recordings of live broadcasts, not individual clubs (though in some countries individual clubs do retain some such rights – Millward, 2011). It was in relation to such league controlled rights that new digital broadcasters began to negotiate exclusive league wide coverage deals from the early 1990s. What had been largely broadcast via free to air terrestrial services (funded by the state or by national advertising) migrated to pay to view services which required subscription payment to access content.

As peer-to-peer and then torrent services emerged in music sharing communities to evade legal attacks, so in sport, live-streaming services became an evasion strategy, in contrast to music, where streaming has been used to create legal services. Globally distributed uploaders of infringing streams cannot be easily prosecuted, and viewers only view content and so can't be prosecuted for making a copy. Simply watching a stream is not making a copy of such content. Live-streaming has emerged as a significant alternative to pay to view digital sports broadcasting (Birmingham and David, 2011; Kirton and David, 2013). The first digital revolution in sports broadcasting (from the 1990s to the late 2000s) involved the buying up of monopoly broadcasting rights at higher prices than were being paid by national terrestrial (analogue) broadcasters, and then selling access rights globally to recoup the additional costs (Millward, 2011). Terrestrial (analogue) television live sports broadcasting was (like radio sports commentary still is) 'free to air', with no scope to directly charge users for access. Funding for services came either from advertising or state funding (itself recouped either by taxation or a general licence fee). The first digital revolution took sports

broadcasting from this ‘free to air’ access model, to a pay-wall protected subscriber or pay per view business model. The second digital revolution in sports broadcasting occurred only when broadband speeds allowed re-routing of such live broadcasting for free via live-streaming channels on the internet (David et al., 2014).

Whilst sports broadcasters continue attempts to uphold monopoly control over content and therefore to prohibit ‘live-streaming’ channels (largely without success - David and Millward, 2012), the music industry has accepted free to access streaming services – such as Spotify and Beats - seeking to recoup revenues from such services in terms of advertising revenues being primarily paid over to record companies in return for the legal right to stream content to users. This parallels in part free to air television and radio (in the pre digital era and still in part today).

Where, in music, the second digital revolution challenged a purchase model that the first digital revolution in music (the rise of the CD) had simply escalated (vinyl records and tape cassettes were sold, but CDs were simply sold for even more); in sports television the second digital revolution challenged a purchase model that was in large part only the product of the first digital revolution itself. Whilst live sport was traditionally free to watch on terrestrial television, the first digital revolution shut down such free access. Whilst recorded music was ‘free’ to listen to on the radio, listening to what you wanted, when you wanted it, required purchase. In both cases the second digital revolution challenges the pay to access model.

As free sharing software was challenging monopoly control in the music industry from 1999, digital sports television was affecting a pay to view model that closed down free to air access (from 1992 onwards). Whilst music downloading was possible with the compression levels and the internet bandwidth available in 1999, it was not possible to watch a live sporting event with any clarity using domestic internet services at that time, and this did not become possible for another ten years. In music, the rise of free alternatives forced the hand of IP holders to deal with the likes of iTunes and Spotify, but only after 17 years of highly profitable digital monopoly control (from 1982 to 1999). In sports broadcasting the lack of viable Internet based alternatives, again for the first 17 years (from 1992 to 2009), enabled the creation of profitable pay to view television services as monopoly control could be maintained. However, since 2009, whilst first movers still maintain their subscriber base today, newer entrants have struggled when squeezed between established monopoly providers (like Sky and Fox), and new free (copyright infringing) alternatives (David et al., 2016). Whilst streaming is viewed as 'the problem' to commercial sports broadcasters, it is perceived as a potential solution by the music industry.

Conclusions

In 2008 the BPI (formerly the British Phonographic Industry) released a booklet claiming that unless prohibited the legacy of file-sharing would be a silent world without music. This doomsday scenario has proven entirely false. The legacy of Napster and subsequent

copyright infringing free sharing services over the internet has been to create a culture that expects free access to recorded music even whilst at the same time maintaining an economy where musicians are better paid than before. This is due to a particular set of parallel economies of music. Whilst copyright infringing free access options exist and continue to exist, despite all legal and technical attempts to prohibit them, a new generation of copyright compliant download and streaming services have risen alongside them. The counterfactual example of digital sports broadcasting (in its early years prior to today's faster broadband internet afforded live-streaming alternatives) suggests, in the absence of a free-sharing alternative, the digital music field might have developed in the direction of a pay to view 'firewall' model. Napster even offered such an arrangement at its 2001 trial, but record companies rejected this. The subsequent free sharing alternatives in the musical field meant such 'closure' never happened. Attempts, today, to create such 'walled gardens' meet with only limited uptake – and even this appears largely to be fishing from existing revenue streams. Free access remains and is taken as the default option by many, such that even most of those that use legal streaming services are not prepared to pay for such access. At the same time, whilst radically diminished, a market for selling recorded music continues to exist even in the absence of effective legal and technical monopoly control. One lasting legacy of the free sharing software movement has therefore been, not to destroy the recording industry, but rather to destroy the myth that intellectual property monopolies are a necessary condition for a viable set of creative industries. Yet the most profound legacy of the copyright infringing free sharing of music online has been in reinforcing the significance of live performance as a means for musicians to get paid. As the established recording industry contract meant almost all recording artists ended up in debt to their record companies rather than actually getting paid, the fact that neither unlawful

nor legal online services reward artists in any significant way does not change anything, at least in the sense of direct payment. What does change when access is free is the decline in opportunity costs such that what was once paid to record companies is now paid for live concert tickets. To the extent that earnings paid to record companies, whether from record shops or streaming services like Spotify, rarely filter down to artists, the shift from paying for records to paying for concert tickets – which do see direct payment to artists (even if these payments are themselves far from ideal, transparent or always equitable), the legacy of free sharing is better rewards for musicians.

References

Albini, S. (1994) 'The problem with music', *Maximum Rock and Roll*, 133; online at: http://www.arancidamoeba.com/mrr/problemwithmusic.html, date accessed 12 September 2008.

Birmingham, J. and David, M. (2011). 'Live-streaming: will football fans continue to be more law abiding than music fans?' *Sport in Society* 14(1), 69-80.

Brown, I. (2014) 'Copyright Technologies and Clashing Rights', in David and Halbert (eds.), pp. 567-85.

Byrne, D. (2013). 'The internet will suck all creative content out of the world', *The Guardian*. 11 October. http://www.theguardian.com/music/2013/oct/11/david-byrne-internet-content-world, date accessed 15 August 2015.

Castells, M. (2009) *Communication Power* (Oxford: Oxford University Press).

David, M. (2010) *Peer to Peer and the Music Industry: The Criminalization of Sharing* (London: Sage).

David, M. (2013). 'Cultural, Legal, Technical and Economic Perspectives on Copyright Online: the Case of the Music Industry' in W.H. Dutton (ed.) *The Oxford Handbook of Internet Studies* (Oxford: Oxford University Press), pp. 464-85.

David, M. and Halbert, D. (eds.) (2014) *Sage Handbook of Intellectual Property* (London: Sage).

David, M. and Halbert, D. (2015) *Owning the World of Ideas* (London: Sage).

David, M. and Kirkhope, J. (2004) 'New digital technologies: privacy/property, globalization and law', *Perspectives on Global Development and Technology*, 3 (4): 437–49.

David, M., Kirton, A. and Millward, P. (2014). 'Sports Television Broadcasting and the Challenge of Live-Streaming' in David and Halbert (eds.), pp. 435-50.

David, M., Kirton, A. and M., Peter (2016: forthcoming) Castells, 'Murdochization', Economic Counterpower and Livestreaming. Convergence: The International Journal of Research into New Media Technologies 22(2). doi: 10.1177/1354856515619247

David, M. and Millward, P. (2012). 'Football's Coming Home?: Digital reterritorialization, contradictions in the transnational coverage of sport and the sociology of alternative football broadcasts', *British Journal of Sociology* 63(2), 349–69.

Dredge, S. (2013). 'Thom Yorke calls Spotify "the last desperate fart of a dying corpse"'. *The Guardian*. 7 October, http://www.theguardian.com/technology/2013/oct/07/spotify-thom-yorke-dying-corpse, date accessed 15 August 2015.

England, L. (2015) 'Apple has a playbook for killing free music, and it was written by Steve Jobs', *Business Insider UK*, http://uk.businessinsider.com/how-steve-jobs-killed-free-music-2015-5, date accessed 16 August 2015.

Habermas, J. (1989 [1962]) *The Structural Transformation of the Public Sphere* (Cambridge: Polity).

Hull, G. (2004) *The Recording Industry* (London: Routledge).

iSkysoft (2015) Top 7 Spotify Alternative for Streaming Music, https://www.iskysoft.com/audio-recorder-mac/spotify-alternative.html, date accessed 15 March 2016.

Kirton, A. (2014). 'Music, Technology and Copyright: The Makings and Shakings of a Global Industry', in David and Halbert (eds.), pp. 586-606.

Kirton, A. and David, M. (2013). 'The Challenge of Unaurhorised Online Streaming to the English Premier League and Television Broadcasters', in B. Huchins and D. Rowe (eds.) *Digital Media Sport: Technology, Power and Identity in the Network Society* (London: Routledge), pp. 81-96.

Kittler, F. (1997) *Literature,Media, Information Systems: Critical Voices in Art, Theory & Culture* (London: Routledge).

Krueger, A. B (2004) 'The Economics of Real Superstars: The Market for Rock Concerts in the Material World', 12 April 2004, Lunchtime speech, www.irs.princeton.edu, date accessed 1 October 2008.

Krueger,A. B. and Connolly, M. (2006) 'Rockonomics: the economics of popular music', in V. A. Ginsberg and D. Throsby (eds.) *Handbook of the Economics of Art and Culture* (Amsterdam: North-Holland), pp. 667–720.

Ingham, T. (2013) 'Is Spotify Bad for Music?' *The Observer: The New Review*, 21 July, p. 4.

Linshi, J. (2014) 'Here's Why Taylor Swift Pulled Her Music From Spotify', *TIME Magazine*, 3 November, http://time.com/3554468/why-taylor-swift-spotify/, date accessed 15 August 2015.

Love, C. (2000) *The Love Manifesto*, http://www.reznor.com/commentary/loves_manifesto1.html, date accessed 16 August 2015.

Marx, K. (1995) *Capital: An Abridged Version* (Oxford: Oxford Paperbacks).

Millward, P. (2011) *The Global Football League: Transnational Networks, Social Movements and Sport in the New Media Age* (London: Palgrave).

Sandall, R. (2007) 'Off the record', *Prospect Magazine*, 137 (August), http://www.prospectmagazine.co.uk/features/offtherecord, date accessed 16th August 2015.

Spotify (2014) 'How is Spotify contributing to the music business?' http://www.spotifyartists.com/spotify-explained/ accessed August 15th 2015

Spotify. (2015) '20 Million Reasons to Say Thanks' https://news.spotify.com/uk/2015/06/10/20-million-reasons-to-say-thanks/, date accessed 10 June 2015.

Vennart, Mike (2012) 'And now to British Theatre'. Screamingsilence.org.

Wall, David (2014) 'Copyright Trolling and the Policing of Intellectual Property in the Shadow of Law', in David and Halbert (eds.), pp. 607-26.

Wu, T. (2011) *The Master Switch: The rise and fall of information empires* (New York: Vintage).